

Mitigating Interference With Frequency Hopping Signals By Deriving Future Hop Frequencies

Abstract

Techniques to avoid interference with a frequency hopping signal that are of a periodic or quasi-periodic nature that may operate in the same frequency band and proximity with other devices. For example, the frequency hopping signals may be transmitted by Bluetooth devices operating in the same frequency band as IEEE 802.11 WLAN devices. When a frequency hopping interfering signal is detected, sufficient knowledge of the frequency hopping sequence is derived without obtaining state of a frequency hop sequence from information carried in the frequency hopping signal. This knowledge is used to predict or determine when future transmissions of the frequency hopping signal will be present in a particular frequency channel of concern. Using knowledge of future hop frequencies, operating parameters of a communication device or network can be adjusted to mitigate interference with the frequency hopping signal only at times when the frequency hopping signal will be in a particular frequency channel or chan-

nels of interest.